



PCT

## RAW SEQUENCE LISTING

DATE: 09/09/2004

PATENT APPLICATION: US/10/506,548

TIME: 15:53:01

Input Set : A:\Q83405 Sequence Listing.txt

Output Set: N:\CRF4\09092004\J506548.raw

```

4 <110> APPLICANT: SEIKAGAKU CORPORATION
5     AMERSHAM BIOSCIENCES K.K.
6     NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY
7     Hisashi NARIMATSU
8     Shigemi SUGIOKA
9     Hideo MOCHIZUKI
11 <120> TITLE OF INVENTION: Sulfotransferase, peptide thereof and DNA encoding the same
13 <130> FILE REFERENCE: Q83405
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/506,548
C--> 15 <141> CURRENT FILING DATE: 2004-09-03
16 <150> PRIOR APPLICATION NUMBER: PCT/JP03/02500
16 <151> PRIOR FILING DATE: 2003-03-04
18 <150> PRIOR APPLICATION NUMBER: JP 2002-57527
19 <151> PRIOR FILING DATE: 2002-03-04
21 <150> PRIOR APPLICATION NUMBER: JP 2002-245994
22 <151> PRIOR FILING DATE: 2002-08-26
24 <160> NUMBER OF SEQ ID NOS: 16
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1041
28 <212> TYPE: DNA
29 <213> ORGANISM: Homo sapiens
31 <220> FEATURE:
32 <221> NAME/KEY: CDS
33 <222> LOCATION: (1)..(1041)
35 <400> SEQUENCE: 1
36 atg cta ttc aaa cag cag gcg tgg ctg aga cag aag ctc ctg gtg ctg   48
37 Met Leu Phe Lys Gln Gln Ala Trp Leu Arg Gln Lys Leu Leu Val Leu
38 1      5      10      15
40 gga agc ctt gcc gtt ggg agt ctc ctg tat cta gtc gcc aga gtt ggg   96
41 Gly Ser Leu Ala Val Gly Ser Leu Leu Tyr Leu Val Ala Arg Val Gly
42      20      25      30
44 agc ttg gat agg cta caa ccc att tgc ccc att gaa ggt cga ctg ggt   144
45 Ser Leu Asp Arg Leu Gln Pro Ile Cys Pro Ile Glu Gly Arg Leu Gly
46      35      40      45
48 gga gcc cgc act cag gct gaa ttc cca ctt cgc gcc ctg cag ttt aag   192
49 Gly Ala Arg Thr Gln Ala Glu Phe Pro Leu Arg Ala Leu Gln Phe Lys
50      50      55      60
52 cgt ggc ctg ctg cac gag ttc cgg aag ggc aac gct tcc aag gag cag   240
53 Arg Gly Leu Leu His Glu Phe Arg Lys Gly Asn Ala Ser Lys Glu Gln
54 65      70      75      80
56 gtt cgc ctc cat gac ctg gtc cag cag ctc ccc aag gcc att atc att   288
57 Val Arg Leu His Asp Leu Val Gln Gln Leu Pro Lys Ala Ile Ile Ile
58      85      90      95

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**ENTERED**

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```

60 ggg gtg agg aaa gga ggc aca agg gcc ctg ctt gaa atg ctg aac cta 336
61 Gly Val Arg Lys Gly Gly Thr Arg Ala Leu Leu Glu Met Leu Asn Leu
62      100      105      110
64 cat ccg gca gta gtc aaa gcc tct caa gaa atc cac ttt ttt gat aat 384
65 His Pro Ala Val Val Lys Ala Ser Gln Glu Ile His Phe Phe Asp Asn
66      115      120      125
68 gat gag aat tat ggt aag ggc att gag tgg tat agg aaa aag atg cct 432
69 Asp Glu Asn Tyr Gly Lys Gly Ile Glu Trp Tyr Arg Lys Lys Met Pro
70      130      135      140
72 ttt tcc tac cct cag caa atc aca att gaa aag agc cca gca tat ttt 480
73 Phe Ser Tyr Pro Gln Gln Ile Thr Ile Glu Lys Ser Pro Ala Tyr Phe
74 145      150      155      160
76 atc aca gag gag gtt cca gaa agg att tac aaa atg aac tca tcc atc 528
77 Ile Thr Glu Glu Val Pro Glu Arg Ile Tyr Lys Met Asn Ser Ser Ile
78      165      170      175
80 aag ttg ttg atc att gtc agg gag cca acc aca aga gct att tct gat 576
81 Lys Leu Leu Ile Ile Val Arg Glu Pro Thr Thr Arg Ala Ile Ser Asp
82      180      185      190
84 tat act cag gtg cta gag ggg aag gag agg aag aac aaa act tat tac 624
85 Tyr Thr Gln Val Leu Glu Gly Lys Glu Arg Lys Asn Lys Thr Tyr Tyr
86      195      200      205
88 aag ttt gag aag ctg gcc ata gac cct aat aca tgc gaa gtg aac aca 672
89 Lys Phe Glu Lys Leu Ala Ile Asp Pro Asn Thr Cys Glu Val Asn Thr
90      210      215      220
92 aaa tac aaa gca gta aga acc agc atc tac acc aaa cat ctg gaa agg 720
93 Lys Tyr Lys Ala Val Arg Thr Ser Ile Tyr Thr Lys His Leu Glu Arg
94 225      230      235      240
96 tgg ttg aaa tac ttt cca att gag caa ttt cat gtc gtc gat gga gat 768
97 Trp Leu Lys Tyr Phe Pro Ile Glu Gln Phe His Val Val Asp Gly Asp
98      245      250      255
100 cgc ctc atc acg gaa cct ctg cca gaa ctt cag ctc gtg gag aag ttc 816
101 Arg Leu Ile Thr Glu Pro Leu Pro Glu Leu Gln Leu Val Glu Lys Phe
102      260      265      270
104 cta aat ctg cct cca agg ata agt caa tac aat tta tac ttc aat gct 864
105 Leu Asn Leu Pro Pro Arg Ile Ser Gln Tyr Asn Leu Tyr Phe Asn Ala
106      275      280      285
108 acc aga ggg ttt tac tgc ttg cgg ttt aat att atc ttt aat aag tgc 912
109 Thr Arg Gly Phe Tyr Cys Leu Arg Phe Asn Ile Ile Phe Asn Lys Cys
110      290      295      300
112 ctg gcg ggc agc aag ggg cgc att cat cca gag gtg gac ccc tct gtc 960
113 Leu Ala Gly Ser Lys Gly Arg Ile His Pro Glu Val Asp Pro Ser Val
114 305      310      315      320
116 att act aaa ttg cgc aaa ttc ttt cat cct ttt aat caa aaa ttt tac 1008
117 Ile Thr Lys Leu Arg Lys Phe Phe His Pro Phe Asn Gln Lys Phe Tyr
118      325      330      335
120 cag atc act ggg agg aca ttg aac tgg ccc taa 1041
121 Gln Ile Thr Gly Arg Thr Leu Asn Trp Pro
122      340      345
125 <210> SEQ ID NO: 2

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## RAW SEQUENCE LISTING

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Input Set : A:\Q83405 Sequence Listing.txt

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```

126 <211> LENGTH: 346
127 <212> TYPE: PRT
128 <213> ORGANISM: Homo sapiens
130 <400> SEQUENCE: 2
131 Met Leu Phe Lys Gln Gln Ala Trp Leu Arg Gln Lys Leu Leu Val Leu
132   1           5           10           15
133 Gly Ser Leu Ala Val Gly Ser Leu Leu Tyr Leu Val Ala Arg Val Gly
134           20           25           30
135 Ser Leu Asp Arg Leu Gln Pro Ile Cys Pro Ile Glu Gly Arg Leu Gly
136           35           40           45
137 Gly Ala Arg Thr Gln Ala Glu Phe Pro Leu Arg Ala Leu Gln Phe Lys
138           50           55           60
139 Arg Gly Leu Leu His Glu Phe Arg Lys Gly Asn Ala Ser Lys Glu Gln
140           65           70           75           80
141 Val Arg Leu His Asp Leu Val Gln Gln Leu Pro Lys Ala Ile Ile Ile
142           85           90           95
143 Gly Val Arg Lys Gly Gly Thr Arg Ala Leu Leu Glu Met Leu Asn Leu
144           100          105          110
145 His Pro Ala Val Val Lys Ala Ser Gln Glu Ile His Phe Phe Asp Asn
146           115          120          125
147 Asp Glu Asn Tyr Gly Lys Gly Ile Glu Trp Tyr Arg Lys Lys Met Pro
148           130          135          140
149 Phe Ser Tyr Pro Gln Gln Ile Thr Ile Glu Lys Ser Pro Ala Tyr Phe
150 145           150          155          160
151 Ile Thr Glu Glu Val Pro Glu Arg Ile Tyr Lys Met Asn Ser Ser Ile
152           165          170          175
153 Lys Leu Leu Ile Ile Val Arg Glu Pro Thr Thr Arg Ala Ile Ser Asp
154           180          185          190
155 Tyr Thr Gln Val Leu Glu Gly Lys Glu Arg Lys Asn Lys Thr Tyr Tyr
156           195          200          205
157 Lys Phe Glu Lys Leu Ala Ile Asp Pro Asn Thr Cys Glu Val Asn Thr
158           210          215          220
159 Lys Tyr Lys Ala Val Arg Thr Ser Ile Tyr Thr Lys His Leu Glu Arg
160 225           230          235          240
161 Trp Leu Lys Tyr Phe Pro Ile Glu Gln Phe His Val Val Asp Gly Asp
162           245          250          255
163 Arg Leu Ile Thr Glu Pro Leu Pro Glu Leu Gln Leu Val Glu Lys Phe
164           260          265          270
165 Leu Asn Leu Pro Pro Arg Ile Ser Gln Tyr Asn Leu Tyr Phe Asn Ala
166           275          280          285
167 Thr Arg Gly Phe Tyr Cys Leu Arg Phe Asn Ile Ile Phe Asn Lys Cys
168           290          295          300
169 Leu Ala Gly Ser Lys Gly Arg Ile His Pro Glu Val Asp Pro Ser Val
170 305           310          315          320
171 Ile Thr Lys Leu Arg Lys Phe Phe His Pro Phe Asn Gln Lys Phe Tyr
172           325          330          335
173 Gln Ile Thr Gly Arg Thr Leu Asn Trp Pro
174           340          345
177 <210> SEQ ID NO: 3

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## RAW SEQUENCE LISTING

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TIME: 15:53:01

Input Set : A:\Q83405 Sequence Listing.txt

Output Set: N:\CRF4\09092004\J506548.raw

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178 <211> LENGTH: 12
179 <212> TYPE: DNA
180 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' Primer for PCR
185 <400> SEQUENCE: 3
186 ctacaaccca tt                                     12
189 <210> SEQ ID NO: 4
190 <211> LENGTH: 12
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial Sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' Primer for PCR
197 <400> SEQUENCE: 4
198 ttagggccag tt                                     12
201 <210> SEQ ID NO: 5
202 <211> LENGTH: 12
203 <212> TYPE: DNA
204 <213> ORGANISM: Artificial Sequence
206 <220> FEATURE:
207 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' Primer for PCR
209 <400> SEQUENCE: 5
210 atgctattca aa                                     12
213 <210> SEQ ID NO: 6
214 <211> LENGTH: 24
215 <212> TYPE: DNA
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' Primer for PCR (GP-
226)
221 <400> SEQUENCE: 6
222 cggaactcgt gcagcaggcc acgc                         24
225 <210> SEQ ID NO: 7
226 <211> LENGTH: 24
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR (GP-
224)
233 <400> SEQUENCE: 7
234 tcgaccttca atggggcaaa tggg                         24
237 <210> SEQ ID NO: 8
238 <211> LENGTH: 25
239 <212> TYPE: DNA
240 <213> ORGANISM: Artificial Sequence
242 <220> FEATURE:
243 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
(SFTex2F)
245 <400> SEQUENCE: 8
246 actggggaac cagaaaaatg aaaag                         25
249 <210> SEQ ID NO: 9
250 <211> LENGTH: 25

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DATE: 09/09/2004

PATENT APPLICATION: US/10/506,548

TIME: 15:53:01

Input Set : A:\Q83405 Sequence Listing.txt

Output Set: N:\CRF4\09092004\J506548.raw

```

251 <212> TYPE: DNA
252 <213> ORGANISM: Artificial Sequence
254 <220> FEATURE:
255 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR
(SFTex2R)
257 <400> SEQUENCE: 9
258 gtgtctccag gcacaacaca tagtg                      25
261 <210> SEQ ID NO: 10
262 <211> LENGTH: 55
263 <212> TYPE: DNA
264 <213> ORGANISM: Artificial Sequence
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
(SFTgateF2)
269 <400> SEQUENCE: 10
270 ggggacaagt ttgtacaaaa aagcaggctt ctttaagcgt ggcttgctgc acgag          55
273 <210> SEQ ID NO: 11
274 <211> LENGTH: 53
275 <212> TYPE: DNA
276 <213> ORGANISM: Artificial Sequence
278 <220> FEATURE:
279 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR
(SFTgateTstop)
281 <400> SEQUENCE: 11
282 ggggaccact ttgtacaaga aagctggggt tagggccagt tcaatgtcct ccc          53
285 <210> SEQ ID NO: 12
286 <211> LENGTH: 22
287 <212> TYPE: PRT
288 <213> ORGANISM: Artificial Sequence
290 <220> FEATURE:
291 <223> OTHER INFORMATION: Description of Artificial Sequence: Ig kappa signal sequence
293 <400> SEQUENCE: 12
294 Met His Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
295   1           5           10           15
297 Val Ile Met Ser Arg Gly
298           20
301 <210> SEQ ID NO: 13
302 <211> LENGTH: 7
303 <212> TYPE: PRT
304 <213> ORGANISM: Artificial Sequence
306 <220> FEATURE:
307 <223> OTHER INFORMATION: Description of Artificial Sequence: FLAG peptide
309 <400> SEQUENCE: 13
310 Asp Tyr Lys Asp Asp Asp Lys
311   1           5
314 <210> SEQ ID NO: 14
315 <211> LENGTH: 94
316 <212> TYPE: DNA
317 <213> ORGANISM: Artificial Sequence
319 <220> FEATURE:
320 <223> OTHER INFORMATION: Description of Artificial Sequence: OT3 seugnce
322 <400> SEQUENCE: 14

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/506,548

DATE: 09/09/2004

TIME: 15:53:02

Input Set : A:\Q83405 Sequence Listing.txt

Output Set: N:\CRF4\09092004\J506548.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date